

acid from gravity type cargo tanks unless:

(1) The tanks are of cylindrical shape with dished heads, and

(2) The air pressure does not exceed:

(i) The design pressure of the tank, and

(ii) 10 pounds per square inch gauge. The tanks must be fitted with pressure relief devices.

(c) During cargo transfer, a water hose must be connected to a water supply and be ready for immediate use. Any leakage or spillage of acid must be immediately washed down. This requirement can be met by facilities provided from shore.

[CGD 80-001, 46 FR 63279, Dec. 31, 1981, as amended by CGD 82-063b, 48 FR 4781, Feb. 3, 1983; CGD 92-100, 59 FR 17028, Apr. 11, 1994]

**§ 151.50-79 Methyl acetylene-propadiene mixture.**

(a) The composition of the methyl acetylene-propadiene mixture at loading must be within one of the following sets of composition limits:

(1) Composition 1 is:

(i) Maximum methyl acetylene to propadiene molar ratio of 3 to 1;

(ii) Maximum combined concentration of methyl acetylene and propadiene of 65 mole percent;

(iii) Minimum combined concentration of propane, butane, and isobutane of 24 mole percent, of which at least one-third (on a molar basis) must be butanes and one-third propane; and

(iv) Maximum combined concentration of propylene and butadiene of 10 mole percent.

(2) Composition 2 is:

(i) Maximum methyl acetylene and propadiene combined concentration of 30 mole percent;

(ii) Maximum methyl acetylene concentration of 20 mole percent;

(iii) Maximum propadiene concentration of 20 mole percent;

(iv) Maximum propylene concentration of 45 mole percent;

(v) Maximum butadiene and butylenes combined concentration of 2 mole percent;

(vi) Minimum saturated C<sub>4</sub> hydrocarbon concentration of 4 mole percent; and

(vii) Minimum propane concentration of 25 mole percent.

(b) A barge carrying a methyl acetylene-propadiene mixture must have a refrigeration system that does not compress the cargo vapor or have a refrigeration system with the following features:

(1) A vapor compressor that does not raise the temperature and pressure of the vapor above 60 °C (140 °F) and 1.72 MPa gauge (250 psig) during its operations, and that does not allow vapor to stagnate in the compressor while it continues to run.

(2) At the discharge piping from each compressor stage or each cylinder in the same stage of a reciprocating compressor:

(i) Two temperature actuated shutdown switches set to operate at 60 °C (140 °F) or less;

(ii) A pressure actuated shutdown switch set to operate at 1.72 MPa gauge (250 psig) or less; and

(iii) A safety relief valve set to relieve at 1.77 MPa gauge (256 psig) or less anywhere except into the compressor suction line.

(c) The piping system, including the cargo refrigeration system, for tanks to be loaded with methyl acetylene-propadiene mixture must be completely separate from piping and refrigeration systems for other tanks. If the piping system for the tanks to be loaded with methyl acetylene-propadiene mixture is not independent, the required piping separation must be accomplished by the removal of spool pieces, valves or other pipe sections and the installation of blank flanges at these locations. The required separation applies to all liquid and vapor piping, liquid and vapor vent lines and any other possible connections, such as common inert gas supply lines.

[CGD 80-001, 46 FR 63279, Dec. 31, 1981]

**§ 151.50-80 Nitric acid (70% or less).**

(a) Tanks, cargo piping, valves, fittings, and flanges (where exposed to the acid) must be lined with nitric acid resistant rubber or fabricated from nitric acid resistant stainless steel. See § 151.15-3(f)(2).

(b) During cargo transfer, a water hose must be connected to a water supply, ready for immediate use. Any